#2344

5220 Detection October 2, 1972

Summary of Detection Surveys On The North Tongass

The Record

The following information is based on aerial and ground surveys that were conducted on the North Tongass National Forest in 1972.

The aerial coverage included the Chatham Ranger District, exclusive of the mainland from the Taku River to Cape Fanshaw; the Sitka Ranger District, exclusive of the Chichagof-Yakobi area and the portion of Baranof Island south of Silver Bay; the Petersburg Ranger District, except for the southwest portion of Kuiu Island; and the Wrangell Ranger District, except for the southern portion of Etolin Island.

Ground surveys, conducted at various times from April through late August, were made by entomologists from the Regional Office and the Forestry Sciences Laboratory at Juneau. The general areas included were Sitka, Silver Bay, Thomas Bay and the locations visited during the annual larval defoliator survey.

In addition to areas of damage caused by insect and disease organisms this report includes significant acreages of recently cutover land occupied by alder and/or black cottonwood. General statements concerning tree killing presumably caused by pulpmill fumes at Silver Bay are also included.

The results of these surveys indicate that insect populations have not significantly increased since 1971. Chronic defoliation caused by the sawfly continues in several locations in the vicinity of Wrangell. However, no new defoliator outbreaks were observed. A small outbreak of spruce beetle, resulting in some tree killing of Sitka spruce, was noted in the vicinity of Sawmill Creek campground near Silver Bay. The following is a breakdown of survey observations by Ranger Districts on the Forest.

CHATHAM RANGER DISTRICT

1. No insect damage was observed in any of the spruce or hemlock stands surveyed.

2. Alder and/or black cottonwood was observed in portions of recently cut harvest units at the following locations:

AREA	ACRES
North end of Sullivan Island (Chilkat Peninsula)	450
Westside of Sullivan Island (Chilkat Peninsula)	375
Sullivan River (Chilkat Peninsula)	400
St. James Bay (Chilkat Peninsula)	1100
Excursion Inlet (3 locations)	400
Chapin Bay (Admiralty Island)	80
Woewodski Harbor (Admiralty Island)	250
Eliza Harbor (Admiralty Island)	1000
Glass Peninsula (4 miles north of Pt. Hugh)	600
Glass Peninsula (1-2 miles south of Winning Cove)	225
TOTAL	4,880

3. Approximately 45,000 acres of defoliation caused by "winter drying" was observed on the Yakutat unit between the Doame and Italio Rivers. The damage, caused by cold winds coming off the glaciers in late winter and early spring, was mostly light to moderate, except in the vicinity of Tonis Mesa where extreme needle drop occurred over approximately 2,800 acres. Favorable climatic conditions during the 1973 season could result in an outbreak of the spruce beetle in this area.

4. No recent blowdown was observed.

SITKA RANGER DISTRICT

1. No defoliation was observed in any of the spruce or hemlock stands surveyed.

2. Tree killing, resulting from spruce beetle activity, is occurring on State, private and Forest Service lands in the vicinity of Sitka. The mortality confined to trees that were severely defoliated by spruce aphid populations in 1970, has resulted in a significant amount of damage to the overmature spruce in and around the Sawmill Creek campground.

A survey of this area with Lloyd Rentfro, a Sitka District Forester, indicates that approximately 40 large diameter trees have already been killed and that an additional 6-10 trees are currently infested. Another summer of relatively dry weather will result in additional mortality.

3. Alder was observed in portions of recent harvest units at the following locations:

AREA	ACRES
Gallager Creek (Icy Straits)	200
South bight of Neka Bay (Port Frederick)	300
Eight Fathom Bight (Port Frederic)	60
Upper end of Port Fredrick	400
Saltery Bay (Tenakee Inlet)	400
Crab Bay (Tenakee Inlet)	600
The south side of Tenakee Inlet between Kadashan and Corner Bay	700
Saook Bay (Peril Strait)	350
Appleton Creek (Peril Strait)	200
Rodman Creek (Peril Strait)	2500
Fish Bay	1200
Nakwasina Bay (3 locations)	1500
Katlian Bay (3 locations)	2200
TOTAL	10,610

4. Tree killing, probably resulting from exposure to sulphide emmissions from the Silver Bay pulpmill, was observed over approximately 400 acres extending from the lower end of the Thimbleberry Lake to the Sawmill Creek campground. The location of this mortality shows an extremely strong correlation with prevailing wind patterns which funnel the fumes into adjacent creek drainages and against the ridge immediately to the west of the hill. The heaviest mortality appears to be in areas where the stands obtain maximum exposure for a prolonged period of time

A ground check of this area in 1970 failed to reveal any insect or disease organism infesting or affecting the declining trees. In addition, most of the mortality has occurred since the last black-headed budworm outbreak in this area subsided in 1965. Especially noteworthy is the fact that large quantities of yellow cedar have recently died. This is a species not fed on by any defoliators in southeast Alaska.

The progressive decline of these stands is expected to continue in areas where prolonged exposure to sulphide emmissions is received.

5. No recent blowdown was observed.

PETERSBURG RANGER DISTRICT

1. No insect damage was observed in any of the spruce or hemlock stands surveyed.

2. Alder and/or black cottonwood was observed in portions of recent harvest units at the following locations:

AREA	ACRES
Totem Bay on west side north of Little Totem Bay	250
Northwest side of Big Castle Island (Duncan Canal)	80
East side of Duncan Canal across from High Castle Island	250
West side of Duncan Canal across from Rookery Island	300
Dry Bay (mainland of Petersburg)	200
Thomas Bay across from Ruth Island	150
Patterson River	350
TOTAL	1,580

3. A ground survey in the young second-growth stands at Thomas Bay revealed that a high percentage of the spruce reproduction apparently is infested with an unknown disease or diseases causing terminal mortality and "dry rot" of new terminal buds. A sampling of the stands in this area with Spencer Isrealson, Petersburg District forestry technician, indicates that approximately 15-20 percent of the advanced spruce in the area have dead terminal leaders or forked tops. This apparent disease occurs in all the regeneration in this area.

A Forest pathologist from the Pacific Northwest Forest and Range Experiment Station at Corvallis, Oregon, has been contacted concerning this problem and has agreed to visit the area in late October.

4. No recent blowdown was observed.

WRANGELL RANGER DISTRICT

1. Light defoliation caused by the hemlock sawfly has been observed at the following locations:

AREA	ACRES
Wrangell Watershed	400
The base of Chichagof Peak near Shoemaker Bay	600
Circle Bay (Worankofski Island)	80
Chichagof Pass (Worankofski Island)	500
TOTAL	1,580

2. Alder and/or black cottonwood was observed in portions of recent harvest units at the following locations:

AREA	ACRES
Two units between Berg Bay and the Narrows at Blake Canal	400
Circle Bay (Worankofski Island)	100
North side of Liesnoi Island	50
South and east sides of Sokolof Island	300
Several locations on Vank Island	625
River bottom units in Bradfield Canal	3000
TOTAL	4,475

3. Dying cedar, caused in part by the cedar bark beetle, commonly occurs on the District and collectively amounts to several thousand acres.

4. No recent blowdown was observed.

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